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## A. L. MINTS, LAUREATE OF THE GOLD MEDAL IMENI A. S. POPOV

On 7 May 1950, the Presidium of the Academy of Sciences USSR awarded the Gold Medal imeni A. S. Popov to the eminent Soviet scientists and designer, A. L. Mints, Corresponding Member of the Academy of Sciences USSR, for his series of outstanding works on radio engineering.

Aleksandr L'vovich Mints has worked in this field for more than 30 years. He has designed and constructed the largest Soviet radio stations. He is the author of some 50 inventions, improvements, and theoretical works, which, in many cases, are superior to foreign work.

After many successful experiments, Mints designed a number of radio telephone installations, capped in 1926 by construction of the 20-kw Broadcasting Station imeni Popov at Moscow which was twice as powerful as similar stations abroad. In the same year, he designed a 10-kw short-wave transmitter, which was the first to use the reactance tube he invented for frequency regulation.

While overseeing construction of the radio station, Mints carried on research and theoretical work on broadcasting apparatus and antennas. In studying the general theory of hf current generation, Mints, A. I. Berg, and I. G. Klyatskin evolved a simpler method of linearizing triode characteristics than the previously applied method. With Klyatskin, Mints developed the first principles of engineering calculations for plate and grid modulation, thus facilitating theoretical calculations for broadcasting stations. Previously, radio station designers had based their plans on experimental data and intuition.

Theoretical calculations formed the basis of plans for the powerful Radio Station imeni VTsSPS (All-Union Central Council of Trade Unions), under the supervision of Mints. The opening of this station, far superior in power and engineering design to existing stations in Western Europe and the US, caused many specialists to come to Moscow to study the station.

The Americans admitted that in planning a radio station near Cincinnati [WLW], they had made use of Mints's system of obtaining superpower. This system was also employed in the New York television center to obtain high-quality wide-band transmission.



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At the beginning of the 1930s, Mints suggested applying the principles of electric power stations to radio engineering. It was then decided to make use of parallel operation of several hf oscillators connected to a common intermediate circuit from which the station antenna is supplied. This principle was first put in practice in the world's most powerful station, the 500-kw Radio Station imeni Komintern, constructed according to Mints's plans in 1931-32.

In 1932, Mints developed an original system for increasing the efficiency of radio transmitters by making use of distortion in the plate and grid voltages of tubes in the output stage of the transmitter.

In 1936-38, the 120-kw short-wave station "RV-96" was constructed under the supervision of Mints and I.Kh. Nevyazhskiy. For this station, Mints developed a new type of antenna which facilitated directional transmission on a wide frequency band. This invention gave the USSR priority in the field of rigid antennas with low characteristic impedance.

During World War II, Mints continued his activity and supervised construction of a new radio station -- the most powerful in the world.

In 1946, he was awarded the Stalin Prize and elected Corresponding Member of the Academy of Sciences USSR.

From the first, he has taken an active part in radio amateur activity. He is a well-known teacher and has trained many talented radio specialists.

The remarkable work of A. L. Mints has made him a worthy successor to the great Popov and has enriched his country's scientific achievements.

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